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Subj: Application No. 10/780,380; Docket CL2207USNA1

Amendment to Office Action of 6/21/05 (8 pages)

Replacement Sheet (1)

Fee Transmittal for FY 2005 (1 sheet)

Petition for Extension of Time (1 sheet)

Via Facsimile No. 571 273 8300

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



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PTO/SB/17 (12-04)

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Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**  
**For FY 2005**☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 120.00**Complete If Known**

Application Number	10/780,30
Filing Date	February 17, 2004
First Named Inventor	Young H. Kim
Examiner Name	S.M. Rayford
Art Unit	1772
Attorney Docket No.	CL2207USNA1

**METHOD OF PAYMENT (check all that apply)**

- ☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_
- ☒ Deposit Account Deposit Account Number: 50-3223 Deposit Account Name: Invista North America S.a.r.l.
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- ☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
- ☒ Charge any additional fee(s) or underpayments ☒ Credit any overpayments
- under 37 CFR 1.16 and 1.17

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**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Small Entity	Fee (\$)	Small Entity	Fee (\$)	Small Entity	Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	300	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Small Entity	Fee (\$)	Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25	
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100	
Multiple dependent claims	360	180	

**Total Claims**            **Extra Claims**            **Fee (\$)**            **Fee Paid (\$)**           

**Multiple Dependent Claims**

**Fee (\$)**            **Fee Paid (\$)**           

HP = highest number of total claims paid for, if greater than 20

**Indep. Claims**            **Extra Claims**            **Fee (\$)**            **Fee Paid (\$)**           

**Fee (\$)**            **Fee Paid (\$)**           

HP = highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

**Total Sheets**            **Extra Sheets**            **Number of each additional 50 or fraction thereof**            **Fee (\$)**            **Fee Paid (\$)**           

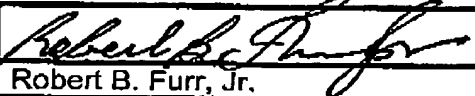
           - 100 =            / 50 =            (round up to a whole number) x            =           

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other: One-Month Extension of Time           

**\$120.00****SUBMITTED BY**

Signature		Registration No. 32,985 (Attorney/Agent)	Telephone 302-683-3316
Name (Print/Type)	Robert B. Furr, Jr.	Date	10-20-2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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NO. 633 P. 4/12

OCT 20 2005

Appl. No. 10/780,380  
Reply to Office Action of June 21, 2005  
Docket: CL2207USNA1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN THE APPLICATION OF:

YOUNG H. KIM, ET AL.

CASE NO.: CL2207USNA1

APPLICATION NO.: 10/780,380

CONFIRMATION NO.: 1816

GROUP ART UNIT: 1772

EXAMINER: S.M. RAYFORD

FILED: FEBRUARY 17, 2004

FOR: ARTICLES COMPRISING AQUEOUS DISPERSIONS OF POLYURETHANES

**AMENDMENT**

**Via Facsimile No. 571 273 8300**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed June 21, 2005, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 4 of this paper.

**Conclusion** begins on page 6.

**Appendix** (replacement sheet) is attached following page 6 of this paper.

**Amendments to the Claims:**

In the claims, Applicants respectfully request entry of amendments made in the claims. These amendments find support in the specification at page 5, lines 21 through 35, and in the specification taken as a whole.

Applicants thank the Examiner for the suggestion to amend the claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): An article made from a polyureaurethane aqueous dispersion and wherein the polyureaurethane comprises a THF copolymer soft segment comprising 25 to 60 percent by weight of ethylene glycol as a comonomer and an aromatic diisocyanate.

Claim 2 (original): The article of claim 1, wherein said article is selected from the group consisting of gloves, finger cots and condoms.

Claim 3 (original): The article of claim 1, having a tensile strength of greater than 2030 psi.

Claim 4 (original): The article of claim 1, having a puncture strength of at least 200 lb/in.

Claim 5 (original): The article of claim 1, having a tear strength per thickness of material of at least 20 Newtons/mm.

Claim 6 (original): The article of claim 1, having an improved resistance to solvent attack.

Claim 7 (original): A process for producing the article of claim 1, comprising the steps:

- a) dipping a mold into a coagulant solution and drying at an elevated temperature;

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- b) dipping the coagulant solution-coated mold into an aqueous polyureaurethane dispersion and drying;
  - c) subjecting the coated mold to a salt leaching bath; and
- drying the coated mold at elevated temperature before stripping the article off of said mold.

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### **REMARKS**

Under the **Detailed Action**, the Examiner objected to the title of the invention as not being descriptive and suggested the following:

**"ARTICLES MADE FROM POLYURETHANE DISPERSIONS".**

Applicants consent to amend the Title of the invention to the Examiner's suggestion for a title descriptive of the invention.

In the specification, the Examiner objected to the informal usage of THF at page 4, line 20, as an abbreviation in the specification.

Applicants respectfully suggest that THF is a well-known informal abbreviation used by those skilled in the art for tetrahydrofuran. Furthermore, the specification as filed notes that co-owned and co-pending Application No. 10/701,317 filed November 4, 2003, hereby incorporated in its entirety, includes the definition of THF, meaning tetrahydrofuran, in paragraphs [0035] and [0036] of U.S. Publication No. 2004/0171745A1 (Application No. 10/701,317).

#### **Rejection under 35 USC § 112**

In the claims, the Examiner objected, under 35 USC § 112, to Claims 1-7 for failing to set forth the subject matter Applicants regard as their invention.

Applicants respectfully maintain that after entry of currently amended Claim 1, now reciting an article made from a polyurethane aqueous dispersion and wherein the polyurethane comprises a THF copolymer soft segment comprising 25 to 60 percent by weight of ethylene glycol as a comonomer and an aromatic diisocyanate, that the subject matter of the invention is clearly set forth.

#### **Rejection under 35 USC § 102(b)**

In the claims, the Examiner objected, under 35 U.S.C. § 102(b), that Claims 1-7 stand rejected as being unpatentable over U.S. Patent No. 5,998,540 (Lipkin) per reason of record.

Applicants maintain that Lipkin does not disclose each and every element as set forth in the claims currently amended, expressly or inherently.

Applicants respectfully disagree with the Examiner's characterization of Lipkin as using the Applicants' identical polyurethane dispersions.

Applicants respectfully submit that in light of the foregoing remarks the rejection of Claims 1-7 based on Lipkin is overcome and should be withdrawn.

**Rejection under 35 USC § 103**

In the claims, the Examiner objected, under 35 U.S.C. § 103, that Claims 1-7 stand rejected as being unpatentable over Anderle et al. (WO02 08327A1) in view of Applicants' admission per reason of record.

Applicants maintain that Anderle et al., in view of Applicants' admission, does not make Claims 1-7 obvious under 35 U.S.C. § 103 for the reason that each and every element as set forth in the claims is neither taught nor suggested in the combination of references applied.

Claim 1 (currently amended) recites a polyureaurethane aqueous dispersion wherein the polyureaurethane comprises a THF copolymer soft segment comprising 25 to 60 percent by weight of ethylene glycol as a comonomer and an aromatic diisocyanate.

Applicants respectfully submit that the teaching of Anderle et al. relating to the substitution of polyether diols in whole or in part for the polyester diols used in the preparation of polyureaurethanes is a general teaching and not specific to the defined composition of the Applicants' THF copolymer soft segment comprising 25 to 60 percent by weight of ethylene glycol as a comonomer.

As such, Applicants respectfully submit that in light of the foregoing the rejection of Claims 1-7 is overcome and should be withdrawn.

**Double Patenting**

The Office Action provisionally rejected Applicants' Claim 1 over Claim 19 of copending U.S. Application No. 10/700,859 in view of Anderle et al. (WO0208327A1).

Applicants traverse. The abstract of Anderle et al. points to the presence of at least one plasticizer introduced during prepolymer formation or before prepolymer dispersal in water. Anderle et al. further points to the plasticizer as substantially or completely replacing organic diluents or solvents. As a result, the Anderle et al. plasticized compositions are less hazardous, typically have lower modulus and higher solids content and are useful in applications such as surgical gloves. The specification of Anderle et al. further discloses starting of page 17 and continuing throughout pages 18-23 to line 10 of page 23. The function of the plasticizer compounds, how the plasticizer is added during polymer formation, the effect of the plasticizer on various polymer compositions and how the plasticizer is chosen are clearly disclosed by Anderle et al. Furthermore, Anderle et al. disclose on page 18 at line 5 the use of plasticized polymer film compositions for gloves. One skilled in the art readily appreciates the details concerning the choice of plasticizer and properties of the



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plasticized polyurethane compositions provided by Anderle et al. In short, one skilled in the art recognizes that plasticizers are vital components to the polyurethane compositions of Anderle et al. for use in applications such as surgical gloves.

In contrast to Anderle et al. the Applicant's claims do not require plasticizer to be added to the polyurethane polymers to make the articles and glove inventions therein recited. On page 7 of the Applicant's specification between lines 21 and 34 the films and gloves of the invention have a modulus of 100% elongation between 200 and 500 psi, allowing an easy stretch of the glove. Additionally, a "low set" is observed which means the gloves of the invention made from the polyurethane polymers disclosed therein return to their original shape after stretching. In summary the polyurethane polymer compositions employed by the Applicants in the manufacture of gloves require no plasticizer content in contrast to the compositions of Anderle et al. which contain a plasticizer.

The Office Action provisionally rejected Applicants' Claim 1 is over Claim 8 of copending U.S. Application No. 10/701,317 (published as US20040171745) in view of Anderle et al. WO0208327A1.

The Applicants traverse this rejection. The abstract of Anderle et al. points to the presence of at least one plasticizer introduced during prepolymer formation or before prepolymer dispersal in water. Anderle et al. further points to the plasticizer as substantially or completely replacing organic diluents or solvents. As a result, the Anderle et al. plasticized compositions are less hazardous, typically have lower modulus and higher solids content and are useful in applications such as surgical gloves. The specification of Anderle et al. further discloses starting of page 17 and continuing throughout pages 18-23 to line 10 of page 23. The function of the plasticizer compounds, how the plasticizer is added during polymer formation, the effect of the plasticizer on various polymer compositions and how the plasticizer is chosen are clearly disclosed by Anderle et al. Furthermore, Anderle et al. disclose on page 18 at line 5 the use of plasticized polymer film compositions for gloves. One skilled in the art readily appreciates these details concerning the choice of plasticizer and properties of the plasticized polyurethane compositions provided by Anderle et al. In short, one skilled in the art recognizes that plasticizers are vital components to the polyurethane compositions of Anderle et al. for use in applications such as surgical gloves.

In contrast to Anderle et al. the Applicant's claims do not require plasticizer to be added to the polyurethane polymers to make the articles and glove inventions therein recited. On page 7 of the Applicant's specification between lines 21 and 34 the films and gloves of the invention have a modulus of 100% elongation between 200 and 500 psi,

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Docket: CL2207USNA1

allowing an easy stretch of the glove. Additionally, a "low set" is observed which means the gloves of the invention made from the polyureaurethane polymers disclosed therein return to their original shape after stretching. In summary the polyureaurethane polymer compositions employed by the Applicants in the manufacture of gloves do not require plasticizer content in contrast to the compositions of Anderle et al. which contain a plasticizer.

Applicants respectfully request that the provisional double patenting rejections be withdrawn.

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**CONCLUSION**

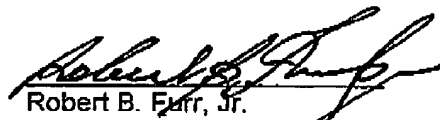
This response is meant to be a complete response to each and every rejection and objection set forth by the Examiner. For at least the reasons stated above, all claims are now in condition for allowance.

In the event any outstanding issues remain, the Examiner is invited to call Applicants' undersigned representative.

A one-month extension of time is attached to this Amendment. Applicants hereby authorize the Commissioner to deduct the fees necessary to comply with this Amendment from the undersigned's Deposit Account No. 503223 (Invista North America S.à r.l.).

Dated: October 20, 2005

Respectfully submitted,



Robert B. Furr, Jr.  
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Appl. No. 10/780,380  
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**—REPLACEMENT SHEET—**

1. An article made from a polyureaurethane aqueous dispersion and wherein the polyureaurethane comprises a THF copolymer soft segment comprising 25 to 60 percent by weight of ethylene glycol as a comonomer and an aromatic diisocyanate.
2. The article of claim 1, wherein said article is selected from the group consisting of gloves, finger cots and condoms.
3. The article of claim 1, having a tensile strength of greater than 2030 psi.
4. The article of claim 1, having a puncture strength of at least 200 lb/in.
5. The article of claim 1, having a tear strength per thickness of material of at least 20 Newtons/mm.
6. The article of claim 1, having an improved resistance to solvent attack.
7. A process for producing the article of claim 1, comprising the steps:
  - a) dipping a mold into a coagulant solution and drying at an elevated temperature;
  - b) dipping the coagulant solution-coated mold into an aqueous polyureaurethane dispersion and drying;
  - c) subjecting the coated mold to a salt leaching bath; anddrying the coated mold at elevated temperature before stripping the article off of said mold.